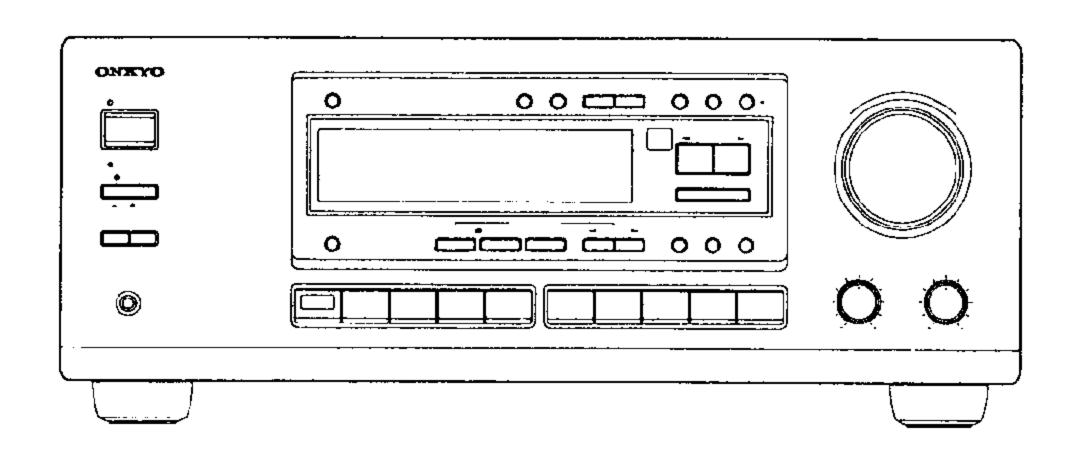
Ref. No. 3648 062000

# ONKYO SERVICE MANUAL

# AUDIO VIDEO CONTROL RECEIVER MODEL TX-DS575X



# Black and Silver and Golden models

BMDD	120 V AC, 60 Hz				
BMPP/BMPT/BMPA	220 V AC 50 H-				
SMPP/GMPT	230 V AC, 50 Hz				
BMWT/BMWR/GMWT	000 000 W /100 W AC TO /CO H				
GMWR	220-230 V/120 V AC, 50/60 Hz				
GMGT	220 V AC, 50/60 Hz				

# SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.



# **SPECIFICATIONS**

### AMPLIFIER SECTION

Continuous Average Power output (FTC)

> All channels: 70 watts per channel min. RMS at

> > 2.5 mV, 50 kohms

300 mV, 50 kohms

8 ohms, 2 channels driven from 20 Hz to 20 kHz with no more than 0.08%

total harmonic distortion.

90 watts min. RMS at 6 ohms, 2 channels driven from 1 kHz with no more

than 0.1% total harmonic distortion.

Continuous Power output (DIN) 100 watts × 5 at 6 ohms Maximum Power output (EIAJ)

130 watts  $\times$  5 at 6 ohms Total Harmonic Distortion: 0.08% at rated power (Front) 0.08% at rated power (Front) IM Distortion: 60 at 8 ohms (Front)

Damping Factor:

Input Sensitivity and Impedance

PHONO:

LINE (CD, TAPE, DVD. VIDEO 1, 2, 3):

MULTICHANNEL INPUT

(FRONT L/R, SUR-

ROUND L/R, CENTER): 300 mV, 50 kohms (SUBWOOFER): 53 mV, 50 kohms COAXIAL 1, 2 (DIGITAL): 0.5 Vp-p, 75 ohms

Output Level and Impedance

Rec out (TAPE, VIDEO 1): 300 mV, 2.2 kohms Pre out (SUBWOOFER): 1 V. 2.2 kohms

70 mV RMS at 1 kHz, 0.5% T.H.D. Phono Overload: Frequency Response: 5 Hz to 100 kHz, +1dB, -3dB RIAA Deviation: 20 Hz to 20 kHz, ±0.8 dB

Tone Control

Bass: ±10 dB at 100 Hz Treble: ±10 dB at 10 kHz

Signal-to-Noise Ratio

Phono: 80 dB (IHF A, 5 mV input)

CD/Tane: 100 dB (IHFA)

# VIDEO SECTION

Input sensitivity/Impedance (DVD, VIDEO 1, 2, 3)

VIDEO (Composite): 1 Vp-p, 75 ohms S-VIDEO (Y signal): 1 Vp-p/75 ohms S-VIDEO (C signal): 0.28 Vp-p/75 ohms

Output Level/Impedance (VIDEO 1, MONITOR)

VIDEO (Composite): 1 Vp-p, 75 ohms S-VIDEO (Y signal): 1 Vp-p/75 ohms S-VIDEO (C signal): 0.28 Vp-p/75 ohms

### **TUNER SECTION**

Tuning Range: 87.5 — 108.0 MHz

Usable Sensitivity

Mono: 11.2 dBf, 1.0 µV (75 ohms) 17.2 dBf, 2.0 µV (75 ohms) Stereo:

50 dB Quieting Sensitivity

Mono: 17.2 dBf, 2.0 µV (75 ohms) Stereo: 37.2 dBf, 20 µV (75 ohms) Capture Ratio:

2.0 dBImage Rejection Ratio U.S.A. & Canadian models: 40 dB Other area models: 85 dB

IF Rejection Ratio: 90 dB

Signal-to-Noise Ratio

Mono: 76 dB Stereo: 70 dB Alternate Channel Attenuation: 55 dB Selectivity: 50 dB (DIN) AM Suppression Ratio: 50 dB

Total Harmonic Distortion

Mono: 0.2% Stereo: 0.3%

Frequency Response: 30 Hz -- 15 kHz, ±1.0 dB

Stereo Separation: 45 dB at 1 kHz

30 dB at 100 Hz - 10 kHz

### AM

Tuning Range

U.S.A. & Canadian models: 530—1,710 kHz (10 kHz steps) European & Australian 522—1,611 kHz (9 kHz steps)

models:

Worldwide models: 531-1,602 kHz (9 kHz steps), 530-1,710 kHz (10 kHz steps)

0.7%

Usable Sensitivity: 30 µV Image Rejection Ratio: 40 dB IF Rejection Ratio: 40 dB Signal-to-Noise Ratio: 40 dB

### **GENERAL**

Total Harmonic Distortion:

Power Supply: AC 120 V. 60 Hz

AC 230 V, 50 Hz

AC 220-230 V and 120 V switchable.

50/60 Hz

AC 220 V, 50/60 Hz

Power Consumption: 3.9 A

325 W

Dimensions  $(W \times H \times D)$ :  $435 \times 175 \times 390 \text{ mm}$ 

 $17-1/8" \times 6-7/8" \times 15-3/8"$ 

Weight: 12.5 kg, 27.6 lbs. (AC 120 V, 60 Hz model)

13.2 kg, 29.1 lbs. (other models)

### REMOTE CONTROL

Transmitter: Infrared

Signal range: Approx. 5 meters, 16 ft. Power supply: Two "AA" batteries  $(1.5 \text{ V} \times 2)$ 

Specications and features are subject to change without notice.

Power supply and voltage vary depending on the area in which the unit is purchased.

# SERVICE PROCEDURES

### 1. Replacing the fuses

This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Pour une protection permanente, n'untiliser que fusibles de meme type. Ce darnier est la qu le present symbol est appse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F911	252198Y	8A-UL, Primary <d w=""></d>
F922	252077 or	4A-SE-EAK or
	252243	4A-SE-TL250V,Primary
		<p a="" t="" w=""></p>
F933	252075 or	2.5A-SE-EAK or
	252241	2.5A-SE-TL250V,AC
		outlet <p t=""></p>

Note: <D>:120V model only <P>: European model only <T>: Asian model only <W>: Worldwide model only <A>: Australian model only

### 2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

- 1.Press and hold down the VIDEO-1 button, then press the SPEAKER A button.
- 2.After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

### 3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.

Specifications: 3.3Mohm±10% at 500V.

# 4. Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

# 5.Setting the AM tuning step frequency (Wolrdwide models only)

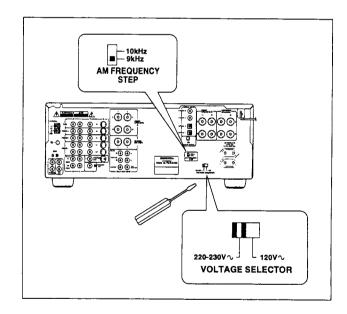
Worldwide models are equipped with a switch that controls the AM band tuning steps. Please set this switch to match the AM band tuning step frequency in your area.

U.S.A. and Canada: 10 kHz Other areas: 9 kHz

# 6.Setting the Voltage selector (Worldwide models only)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit.

- Determine the proper voltage for your area: 220-230 V or 120 V.
- 2. If the preset voltage is not correct for your area, insert a screw-driver into the groove in the switch. Slide the switch all the way to the right (120 V) or to the left (220-230 V), whichever is appropriate.

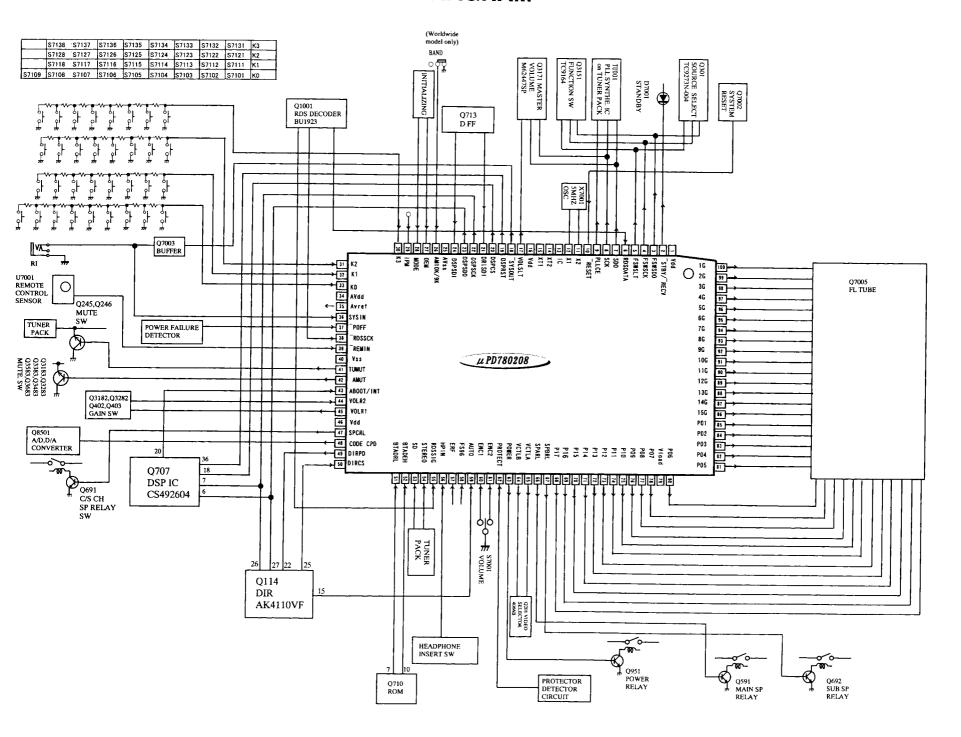


### 7. Changing the AM band step

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

	To 10kHz	To 9kHz
R7077	Open	2.2k
R7130	10k	18k

# MICROPROCESSOR CONNECTION DIAGRAM

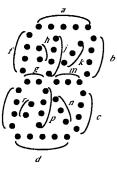


# MICROPROCESSOR TERMINAL DESCRIPTION

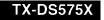
No.	Symbol	1/0	Description	No.	Symbol Symbol	1/0	Description
1	VDD		Power supply pin	38	RDSSCK	1	Clock input pin from RDS decoder
2	STBY/RECV	0	Standby/Received indicator control output pin	39	REMIN	i	Signal input pin for remoter controller
3	FSWSDO	0	Serial data output pin to function switch IC	40	AVss	<u> </u>	Ground pin
4	FSWSCK	0	Serial clock output pin to function switch IC	41	TUMUT	0	Muting control signal output pin for tuner section
5	FSWSLT	0	Serial latch output pin to function switch IC	42	AMUT	0	Muting control signal output pin for amplifier section
6	RDSDATA	I	Data input pin from RDS decoder	43	ABOOT/INT	1/0	AUTOBOOT/INTREQ input/output pin
7	SDO	0	Serial data output pin to PLL and Electro volume ICs.	44	VOL RL2	0	Control output pin for volume selector relay 2
8	SCK	0	Serial clock output pin to PLL and Electro volume ICs	45	VOL RL1	0	Control output pin for volume selector relay 1
9	PLLCE	0	Serial data latch output pin to PLL IC	46	VDD	-	Power supply pin
10	RESET	I	System reset input pin	47	SPCRL	0	Speaker relay control output pin
11	X2	0	Master clock connection pins.	48	CODE CPD	0	Power down control output pin for CODEC IC
12	X1	I	Connect the ceramic oscillator across the both pins.	49	DIRPD	0	Power down control output pin for AK4110
13	IC	1	Internal connection pin.	50	DIRCS	0	Chip select output pin for AK4110
14	XT2	0	Sub clock connection pins. Not used.	51	BTADRH	0	Setting input pin for LSB address of boot ROM
15	XT1	I	Not used.	52	BTADRL	0	Setting input pin for MSB address of boot ROM
16	Vpp1	1	Power supply pin	53	SD	1	Broadcast detection input
17	VOLSLT	0	Serial latch output pin to Electro volume IC	54	STEREO	1	FM stereo broadcast detection input pin
18	SYSOUT	0	Signal output pin for system code	55	RDSSIG	I	Signal input pin from RDS decoder
19	DSPRST	0	Reset signal output pin to DSP IC CS492604	56	HPIN	I	Detection input pin when the headphones are inserted.
20	DSPCS	0	Chip select output pin to DSP IC	57	ERF	I	Not used.
21	DRISOI	I	Serial data input pin from the digital audio interface	58	FS96	i	Not used.
			receiver IC AK4110	59	AUTO	1	AUTO signal input pin from AK4110
22	DSPSCK	0	Serial clock output pin to AK4110 and CS492604	60	ENC1	1	Rotary encoder input pin for volume control
23	DSPSDO	0	Serial data output pin to AK4110 and CS492604	61	ENC2	1	Rotary encoder input pin for volume control
24	DSPSDI	1	Serial data input pin from CS4926	62	PROTECT	1	Detection input pin for protection circuit
25	Avss	1	Ground pin for A/D converter	63	POWER	0	Control output pin for power switch relay
26	AM9K/10K	I	Initializing input pin for AM band step. 9 kHz step at "H"	64	VCTRB	0	Control output pin for video selector switch
27	OEM	I	Initializing input pin for unit setting	65	VCTRA	0	Control output pin for video selector switch
28	MODE	I	Initializing input pin for operation mode	66	SPARL	0	Control output pin for speaker relay A
29	IPM	I	IPM switch connection pin. Not used.	67	SPBRL	0	Control output pin for speaker relay B
30-33	K3-K0	1	Operation key connection pins.	68-78	P17-P07	0	Segment output pins
34	AVDD	-	Power supply pin for A/D converter	79	VLOAD		Power supply pin for FL controller
35	AVREF	I	Reference voltage input pin for A/D converter	80-85	P06-P01	0	Segment output pins
36	SYSIN	1	System code input pin	86-100	15G-1G	0	Grid output pins
37	POFF	I	Power failure detect input pin				

# **FL TUBE VIEW**

15G	<i>13G</i>	11G	9G	7G	6G	5G	<i>3G</i>	2G	
SPEAKERS  A B	SLEEP AUTO STANDBY	MPEG PCM DIGITAL	DOLBY DIGITAL DOLBY PRO LOGIC	DTS	DSP	STEREO DIRECT	► TUNED ◀ FM STEREO	FM MUTE RDS	
		: : : / : : : /						/:	it ch IB
140	$\widehat{\mathcal{G}}$	12G	10G 8G			40	7	1G	



		15G	14G		12G	11G	100	. 9G	8G	7G	6G	5G	46	3G	2G	IG
, P.		SPEAKERS	_	SLEEP	·-	MPEG		DOLBY DIGITAL	_	DTS	DSP	STEREO		TUNED	RDS	dB
P.		A	-	AUTO STANDBY			_		_		_	DIRECT	_	<b>&gt;</b> 4	FM MUTE	ch
P.	7	В				PCM DIGITAL		DOLBY PRO LOGIC	_	_	_		_	FM STEREO	MEMORY	ft
Pá	4	С	с	С	c	с	С	С	С	С	С	С	С	с	С	С
PS	-	ħ	ħ	ħ	ħ	ħ	h	ħ	ħ	h	h	h	ħ	h	ħ	h
20	-	j	j	j	1	j	j	j	j	j	j	j	j	j	j	j
PZ	_	<u>k</u>	K	k	k	k	k	k	k	k	k	k	k	k	k	k
P8	<u> </u>	b	ь	ь	ь	ь	ь	ь	ь	ь	ь	ь	ь	ь	ь	ь
29		ſ	f	f	1	f	f	f	f	f	f	f	f	1	f	f
PL		m	m	m	m	m	m	т	m	m	m	m	m	m	m	m
PL	4	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
PL.	2	с	с	с	c	С	С	с	С	С	c	c	c	c	c	c
PI	3	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e
PL	1	r	r	r	r	r	7	7	7	7	,	<i>r</i>	,		<i>r</i>	7
PL	5	р	p	ρ	P	Р	р	Р	p	Р	Р	p	P	p	P	
PI	5	п	п	П	п	п	n	n	n	п	,		7	<i>n</i>	<i>n</i>	P
PL	<u>z</u>	d	ď	d	ď	d	ď	d	d	d	d	ď	d	d	d	<u>"</u>



NOTE: THE COMPONENTS INDENTIFIDE BY MARK A ARE

CIRCUIT NO. PART NO.

Capacitors

CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.

DESCRIPTION

REPLACE ONLY WITH PART NUMBER SPECIFIED.

# PRINTED CIRCUIT BOARD PARTS LIST

PART NO.

ICs

CIRCUIT NO.

PRE., AMPLIFIER PC BOARD (NAVD-6746-1A/1B/1C/1D/1G/1H)

DESCRIPTION

	ICs			Capacitors	
Q203	22240373	BA7625	C3581,C3681	354782209	22 μ F,50V,Elect.
Q3171	22241296	M62447SP	C3586,C3684	354744709	47 μ F,16V,Elect.
Q3180,Q3181	22270247 or	BA15218N or	C3683	374724734	0.047 µ F±5%,50V,Plastic
Q3281,Q3381	22240293	NJM4558L-D		Terminals	
Q3184	22240025	LC4966	P201	25045567	NPJ-1PDBL382
Q3581	22270247 or	BA15218N or	P202,P203	25045299	NPJ-3PDYE158
	22240293	NJM4558L-D		Sockets	
	Transistors		P204	25051430	NSCT-8P1217
Q201,Q204	2213354,	2SA933S-R,	P205	25051438	NSCT-16P1225
4201,420	2212125 or	2SA1048-GR or	P206	25051426	NSCT-4P1213
	2215995	KTA1267-GR	P391		L NSAS-16P0734
0202	2213993 2212286 or	2SC2878-B or	P601		L NSAS-10P0712
Q202			F 00 1	200933034101	110/10/10/12
	2212285	2SC2878-A			
Q205	2213640,	DTC123JS,	S TERMINAL PO	BOARD (NAV	D-6747-1A/1B/1C/1D/1G/1H)
	2214660 or	RN1205 or	This PC board is	included to NA	/D-6746
	2215830	KRC105M	CIRCUIT NO.	PART NO.	DESCRIPTION
Q3182,Q3183	2213631 or	RN1241-A or		ICs	
	2213632	RN1241-B	Q2003,Q2004	22240373	BA7625
Q3185	2213510,	DTA114ES,		Transistors	
	2214350 or	RN2202 or	Q2001,Q2002	2212125,	2SA1048-GR,
	2215770	KRA102M	Q2005,Q2006	2215995 or	KTA1267-GR or
Q3186	2213290,	DTC114ES,		2213354	2SA933S-R
	2214230 or	RN1202 or		Diodes	
	2215960	KRC102M	D2001,D2002	223163 or	1SS133 or
Q3187	2213580,	RN2203,		223205	1SS270A
	2215780 or	KRA103M or		Capacitors	
	2212600	DTA124ES	C2001-C2009	354780229	2.2 μ F,50V,Elect.
Q3188	2213560,	RN1204,	C2010,C2012	354724719	470 μ F,6.3V,Elect.
	2215820 or	KRC104M or	C2011	354780229	2.2 µ F,50V,Elect.
	221282	DTC144ES	C2024	354781009	10 μ F,50V,Elect.
Q3282,Q3283	2213631 or	RN1241-A or	C2028,C2029	354722219	220 µ F,6.3V,Elect.
Q3383,Q3483	2213632	RN1241-B		Terminals	
Q3583	2213631 or	RN1241-A or	P2001,P2002	25051568	NSCT-12P1355
Q3683,Q3684	2213632	RN1241-B	1 2001,1 2002	2000.000	11001 121 1000
<b>Q</b> 0000, <b>Q</b> 0004	Diodes	10012112	DDIMARY CIDO	UIT DC BOADD	(NADC 6749 4 A /I D /I C /I D /I C /I U)
D201 D202	223163 or	1SS133 or			(NAPS-6748-1A/1B/1C/1D/1G/1H)
D201,D202			CIRCUIT NO.	PART NO.	DESCRIPTION
D207,D208	223205	1SS270A	0051	Transistor	DTC12216
D3171	224470512	MTZJ5.1B	Q951	2213640,	DTC123JS,
D3182	223163 or	1SS133 or		2214660 or	RN1205 or
	223205	1SS270A		2215830	KRC105M
D3276,D3277	224470472	MTZJ4.7B		Diodes	
	Capacitors		D952	22380032,	1SR139-100,
C201-C204	354780229	2.2 μ F,50V,Elect.		22380035 or	GP104003E or
C205,C206	354724719	470 μ F,6.3V,Elect.		22380260	RL1N4003
C210	354721019	100 μ F,6.3V,Elect.	D955	223163 or	1SS133 or
C3171,C3177	354741009	10 μ F,16V,Elect.		223205	1SS270A
C3173,C3175	354744709	47 μ F,16V,Elect.		Power transfo	rmer
C3186,C3271	354741009	10 μ F,16V,Elect.	T902	2301381 or 🙎	∆NPT-1358D or
C3187,C3287	374721534	0.015 μ F±5%,50V,Plastic		2301258	∆NPT-1294D <d></d>
C3189,C3195	354784709	47 μ F,50V,Elect.		2301382	NPT-1358P <p a="" t=""></p>
C3192,C3193	354744709	47 μ F,16V,Elect.		2301383	NPT-1358DG <w gt="" r=""></w>
C3194	354780479	4.7 μ F,50V,Elect.		Capacitors	
C3196,C3296	354782209	22 µ F,50V,Elect.	C901	· ·	∑RE275V-103M
C3286	354741009	10 μ F,16V,Elect.	C952	354743319	330 μ F,16V,Elect.
C3289,C3295	354784709	47 μ F,50V,Elect.		Resistor	• • •
C3371,C3471	354741009	10 μ F,16V,Elect.	R901		\RC1/2GFKUL-3.3M <d></d>
C3381,C3481	354782209	22 μ F,50V,Elect.		Slide switch	<u>.</u>
C3384,C3484	354744709	47 μ F,16V,Elect.	S902		\NSS-22157P <w r=""></w>
C3571,C3671	354741009	10 μ F,16V,Elect.			
		·			



NOTE: THE COMPONENTS INDENTIFIDE BY MARK  $\triangle$  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

KTD2061-Y

2203434

CIRCUIT NO.	PART NO.		DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Relay				Capacitors	
RL901	25065561,	_	NRL-1P5A-DC12-127,	C641,C642	374721034	0.01 μ F±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
	25065508,		NRL-1P10A-DC12-093,	C643,C644	374721024	1000pF±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
	25065515 or		NRL-1P5A-DC12-096 or	C645,C646	374721034	0.01 $\mu$ F±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
	25065526	Δ:Δ	NRL-1P5A-DC12-102	C647,C648	374721024	1000pF±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
	Fuses				Terminal	
F911	252198Y	Δ	8A-UL <d r="" w=""></d>	P603	25060296	NTM-8PDMN227
F922	252077 or	Δ	4A-SE-EAK or		Relays	
	252243	Δ	4A-SE-TL250V <p a="" gt="" r="" t="" w=""></p>	RL601,RL602	25065563,	NRL-2P5A-DC24-129,
F933	252075 or	Δ	2.5A-SE-EAK or		25065510 or	NRL-2P5A-DC24-095 or
	252241	Δ	2.5A-SE-TL250V <p t=""></p>		25065590	NRL-2P8A-DC24-144
	Fuse holders				Socket	
F901,F902	25052133	Δ	NSCT-1P2031 <d r="" w=""></d>	JL602B	25051112	NSCT-8P899
F903,F904	25052133	Δ	NSCT-1P2031 <p a="" gt="" r="" t="" w=""></p>			
F905,F906	25052133	Δ	NSCT-1P2031 <p t=""></p>	INPUT SWITCH	PC BOARD (N	AETC-6752-1A/1B/1C/1D/1G/1H)
	AC outlet			CIRCUIT NO.	PART NO.	DESCRIPTION
P903	25051126	Δ	NSCT-4P913 <d></d>		ICs	2200.111 (10)
	25051125	Δ	NSCT-4P912 <p gt="" t="" w=""></p>	Q301	22240864	TC9273N-004
	25052115	Δ		Q302	22270247 or	BA15218N
	25052382	Δ	NSCT-4P2279 <r></r>	GOOL	22240293	NJM4558L-D
	Socket		NOOT II ZETO KIIP		Capacitors	NON-1330E-D
JL961B	25050267		NSCT-3P95	C315,C316	354741009	10 μF,16V,Elect.
020010	Plug		11001 01 00	C313,C310		
P901A	25055675	٨	NPLG-2P631	0321,0322	354782209	22 μ F,50V,Elect.
13017	23033073	~	141 EG-21 001	D204 D200	Terminals	ND LADDDINOSO
				P301,P302	25045575 or	NPJ-4PDRW389 or
		ADG	6-6749-1A/1B/1C/1D/1G/1H)	Door	25045303	NPJ-4PDBL162
CIRCUIT NO.	PART NO.		DESCRIPTION	P305	25045571 or	NPJ-6PDRW386 or
07004	IC		T0711011010		25045300	NPJ-6PDBL159
Q7301	222755		TC74HCU04P	_	Sockets	
	Photo couplers	S		P303	25051440	NSCT-18P1227
U7301,U7302	24120037		TORX1788	P304	25051426	NSCT-4P1213
	Coils					
L7301	233454K220		NCH-1452 220K	MULTI-CHANN	EL INPUT PC B	OARD (NAETC-6757-1A/1B/1C/1D/1G/1H)
L7302,L7303	233454M022		NCH-1452 022M	CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors				ICs	
C7302	354721019		100 μ F,6.3V,Elect.	Q241-Q243	22270247 or	BA15218N
C7307,C7311	374721044		0.1 µ F±5%,50V,Plastic		22240293	NJM4558L-D
	Terminals				Capacitors	
P7301	25045504		NPJ-1PDBL319	C248,C249	354741009	10 μ F,16V,Elect.
P7302,P7303	25045473		NPJ-1PDBL291		Terminal	
	Plugs			P241	25045572	NPJ-6PDBRW387
P7205C	25055238		NPLG-7P222		Plug	
P7206C	25055233		NPLG-2P217	P242A	25055995	NPLG-9P947
	Switch					
S7301	25065581		NSS-22203 <w r=""></w>	POWER AMPLI	FIER PC BOAR	D (NAAF-6760-1A/1B)
				CIRCUIT NO.	PART NO.	DESCRIPTION
POWER SWITCH	H PC BOARD (N	AP	S-6750-1A/1B/1C/1D/1G/1H)		Transistors	
CIRCUIT NO.	PART NO.		DESCRIPTION	Q1501,Q1502	2211732, *	2SC1845-F,
S901		Δ	NPS-111-L512P,Switch	Q601-Q604		2SC1775A-E,
C902			RE275V-103M,IS capacitor			2SC1775A-F or
			, ,			2SC1845-E
SPEAKER TEDA	AINAL B PC BO	ΔRI	) (NAETC-6751-1A/1B)	Q1504,Q1505	2211763	2SA949-O,
CIRCUIT NO.	PART NO.		DESCRIPTION	Q1507,Q1505	2215843 or	KTA1024-O or
Carloon No.	Transistors		DECOMIT HON	21001	2215844	KTA1024-0 01 KTA1024-Y
Q691,Q692	2213640,		DTC123JS,	Q1508		
200.,0002	2214660 or		RN1205 or	G1500	2211633,	2SC2229-O, KTC3206-O or
	2215830		KRC105M		2215853 or	KTC3206-O or
	Diodes		TO TO TOUR	01500	2215854	KTC3206-Y
D691,D692			199133 or	Q1509	2212653 or	2SC3421-O or
2600,1600	223163 or		1SS133 or	01510	2212654	2SC3421-Y
	223205		1SS270A	Q1510	2203010 or	2SC5171 or

CIRCUIT NO.	PART NO. Transistors	DESCRIPTION	CIRCUIT NO.	PART NO. Capacitors	DESCRIPTION
Q1511	2203000 or	2SA1930 or	C615,C616	354781009	10 μ F,50V,Elect.
	2203424	KTB1369-Y	C619,C620	354781009	10 μ F,50V,Elect.
Q1512	2203063,	* 2SC5198-O,	C621,C622	374724734	0.047 μ F±5%,50V,Plastic
Q623,Q624	2202523,	* 2SC4468-O,	C623,C624	374721044	0.1 μ F±5%,50V,Plastic
,	2202524,	* 2SC4468-Y,	C627,C628	354772219	220 μ F,63V,Elect.
	2202526 or	* 2SC4468-P or	C631-C634	354774709	47 μ F,63V,Elect.
	2203062	* 2SC5198-R	C635-C638	354771009	10 μ F,63V,Elect.
Q1513	2203053,	* 2SA1941-O,	C639,C640	354780109	1 μ F,50V,Elect.
Q625,Q626	2202513,	* 2SA1695-O,	C681	354781009	10 μ F,50V,Elect.
Q025,Q020	2202514,	* 2SA1695-Y,	0001	Resistors	1021,001,2001.
	2202516 or	* 2SA1695-P or	R1512,R1513	443528204	82 Ω ±5%,1/2W,Metal oxide
	2203052	* 2SA1941-R	R1515	443526804	68Ω±5%,1/2W,Metal oxide
Q1515	2212115,	2SC2458-GR,	R1516	443528204	82Ω±5%,1/2W,Metal oxide
Q1515					
	2215864 or	KTC3199-GR or	R1517	443525604	56Ω±5%,1/2W,Metal oxide
04504	2213284	2SC1740S-R	R1519	443522214	220Ω±5%,1/2W,Metal oxide
Q1591	2213640,	DTC123JS,	R1522,R1523	453530224	2.2Ω±5%,1/2W,Metal
	2214660 or	RN1205 or	R1524	4000132,	RGC55 0.22,
0005 0000	2215830	KRC105M		4000201 or	RF-5EGKR22 or
Q605,Q606	2211353,	2SA949-O,	D4500	4500245	BPR55FK0. 22
Q613,Q614	2215843 or	KTA1024-O or	R1529	453630824	8.2 Ω±5%,1W,Metal
04500	2215844	KTA1024-Y	R1532	5210288	N06HR2.2KBE,Trimming
Q1503	2211732,	2SC1845-F,	R1534,R1535	4500159	0.22 Ω ±5%,1/4W,Metal
Q1514	2210755,	2SC1775A-E,	R623-R626	443528204	82Ω±5%,1/2W,Metal oxide
Q609,Q610	2210756 or	2SC1775A-F or	R629,R630	443525604	56Ω±5%,1/2W,Metal oxide
Q627,Q628	2211733	2SC1845-E	R633,R634	443526804	68 Ω ±5%,1/2W,Metal oxide
Q611,Q612	2215864,	KTC3199-GR,	R635,R636	443528204	82Ω±5%,1/2W,Metal oxide
	2212115 or	2SC2458-GR or	R641,R642	443522214	220Ω±5%,1/2W,Metal oxide
0615 0616	2213284	2SC1740S-R	R643-R646	453530224	2.2Ω±5%,1/2W,Metal
Q615,Q616	2212653 or	2SC3421-O or	R647,R648	4000132,	RGC55 0.22,
0017.0010	2212654	2SC3421-Y		4000201 or	RF-5EGKR22 or
Q617,Q618	2211633,	2SC2229-O	Deer Deee	4500245	BPR55FK0. 22
	2215853 or	KTC3206-O	R655,R656	453630824	8.2Ω±5%,1W,Metal
0610 0600	2215854	KTC3206-Y	R659,R660	4500268	2.2Ω±5%,1/2W,Metal
Q619,Q620	2203010 or 2203434	2SC5171 or KTD2061-Y	R673,R674	5210288	N06HR2.2KBE,Trimming
Q621,Q622	2203000 or	2SA1930 or	R675-R678	4500159	0.22Ω±5%,1/4W,Metal
Q021,Q022	2203424	KTB1369-Y	RL1501	Relay 25065574	NRL-1P5A-DC24-134
Q629,Q630	2215843,	KTA1024-O,	HEISOI	Sockets	NAC-11 3A-0024-104
Q029,Q000	2211353 or	2SA949-O or	JL501B	25050283	NSCT-6P111
	2215844	KTA1024-Y	JL602A	25050205	NSCT-8P899
	Diodes	KIAIOET	JL902B	25050282	NSCT-5P110
D1501,D1506	223163 or	1SS133 or	JL903B	25050282	NSCT-4P109
D607,D608	223205	1SS270A	023000	Plugs	11001-41 100
5007,5000	Coils	75527571	P1511	25055038	NPLG-2P29
L1501	231176SY	S-1.3C	P601A	25055236	NPLG-5P220
L601,L602	231176SY	S-1.3C	P611,P612	25055230	NPLG-2P29
2001,2002	Capacitors	3 1.33	1 011,1 012	20000000	10 Ed 21 20
C1501	354784709	47 μ F,50V,Elect.	EDON'T CHANK	IEL DOWED AN	DUED DO DOADD (NAAE 0704 4A/4D)
C1502	374721015	100pF±10%,50V,Plastic			PLIFIER PC BOARD (NAAF-6761-1A/1B)
C1503	354742219	220 μ F,16V,Elect.	CIRCUIT NO.	PART NO. Transistors	DESCRIPTION
C1504,C1505	354781009	10 \( \mathcal{F}\), Floot, Elect.	Q501-Q504		* 2SC1845-F,
C1510	374724734	0.047 μ F±5%,50V,Plastic	Q301-Q304		* 2SC1775A-E,
C1510	374721044	0.1 μ F±5%,50V,Plastic			* 2SC1775A-E,
C1511	354744709	47 μ F,16V,Elect.			* 2SC1845-E
C1530			OFOE OFOE		
C1530 C1533,C1534	354780109 354771009	1 μ F,50V,Elect. 10 μ F,63V,Elect.	Q505,Q506 Q527,Q528	2210755,	2SC1775A-E,
C601,C602	354771009	47 μ F,50V,Elect.	Q527,Q528	2210756,	2SC1775A-F,
C603,C604	374721015	47 μ F,50V,Elect. 100pF±10%,50V,Plastic		2211733 or 2211732	2SC1845-E or 2SC1845-F
C605,C606	354744709	47 μ F,16V,Elect.		ELITOE	2001010-1
C607,C608	354742219	220 \(\mu\) F,16V,Elect.			
,		,			

**CAUTION:** Replacement of the transistor of mark \* , if necessary, must be made from the same beta group (HFE) as the original type.

CIRCUIT NO.	PART NO. Transistors	DESCRIPTION	CIRCUIT NO.	PART NO. Resistors	DESCRIPTION
Q507-Q510	2211353,	2SA949-O,	R521-R524	443528204	82Ω±5%,1/2W,Metal oxide
	2215843 or	KTA1024-O or	R525,R526	443526804	68Ω±5%,1/2W,Metal oxide
	2215844	KTA1024-Y	R527,R528	443528204	82Ω±5%,1/2W,Metal oxide
Q513,Q514	2211353,	2SA949-O,	R529,R530	443525604	56Ω±5%,1/2W,Metal oxide
	2215844 or	KTA1024-Y or	R539-R542	453530224	2.2 Ω ±5%,1/2W,Metal
	2215843	KTA1024-O	R543,R544	443522214	220 Ω ±5%,1/2W,Metal oxide
Q515,Q516	2211633,	2SC2229-O,	R547,R548	4000132,	RGC55 0.22,
	2215854 or	KTC3206-Y or		4000201 or	RF-5EGKR22 or
	2215853	KTC3206-O		4500245	BPR55FK0.22,Metal plate
Q517,Q518	2212654 or	2SC3421-Y or	R555,R556	453630824	8.2 Ω ±5%,1W,Metal
	2212653	2SC3421-O	R557,R558	443623914	390Ω±5%,1W,Metal oxide
Q519,Q520	2203010 or	2SC5171 or	R573,R574	5210259	N06HR2KBC,Trimming
	2203434	KTD2061-Y	R591,R592	4500171	2.2Ω±5%,1/4W,Metal
Q521,Q522	2203000 or	2SA1930 or		Sockets	
	2203424	KTB1369-Y	JL501A	25051110	NSCT-6P897
Q523,Q524	2203063,	* 2SC5198-O,	JL503A	25051112	NSCT-8P899
	2202523,	* 2SC4468-O,	JL901A	25051111	NSCT-7P898
	2202524,	* 2SC4468-Y,	JL902A	25051109	NSCT-5P896
	2202526 or	* 2SC4468-P or	JL903A	25051108	NSCT-4P895
_	2203062	* 2SC5198-R	P502	200B010420UI	L NSAS-4P0717
Q525,Q526	2203053,	* 2SA1941-O,	P504	2002381460UL	NSAS-14P0710
	2202513,	* 2SA1695-O,		Plugs	
	2202514,	* 2SA1695-Y,	P511,P512	25055038	NPLG-2P29
	2202516 or	* 2SA1695-P or	P520A	25055913	NPLG-7P866
_	2203052	* 2SA1941-R			
Q529,Q530	2212115,	2SC2458-GR,	SPEAKER TER	MINAL PC BOA	RD (NAETC-6763-1A/1B)
	2213284 or	2SC1740S-R or	CIRCUIT NO.	PART NO.	DESCRIPTION
	2215864	KTC3199-GR		Diodes	
Q581,Q582	2210755,	2SC1775A-E,	D591	223163 or	1SS133 or
	2210756,	2SC1775A-F,		223205	1SS270A
	2211733 or	2SC1845-E or		Capacitors	
	2211732	2SC1845-F	C1526	374721034	0.01 $\mu$ F±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
Q583	2211793 or	2SA992-E or	C1535	374721024	1000pF±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
0504	2211792	2SA992-F	C561,C562	374721034	0.01 µ F±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
Q591	2213640,	DTC123JS,	C565,C566	374721024	1000pF±5%,50V,Plastic <p a="" gt="" r="" t="" w=""></p>
	2214660 or	RN1205 or		Relay	
	2215830	KRC105M	RL501	25065563,	NRL-2P5A-DC24-129,
DE11 DE10	Diodes			25065510 or	NRL-2P5A-DC24-095 or
D511,D512	223163 or	1SS133 or		25065590	NRL-2P8A-DC24-144
Deza	223205	1SS270A		Terminal	
D571	224470512	MTZJ5.1B	P501	25060297	NTM-6PDMN228
15041500	Coils	0.4.00		Socket	
L501,L502	231176SY	S-1.3C	JL503B	25051112	NSCT-8P899
CEN1 CEN2	Capacitors	475.504.51			
C501,C502	354784709	47 μ F,50V,Elect.	SECONDARY C	IRCUIT PC BOA	RD (NAETC-6766-1A/1B)
C503,C504	374721015	100pF±10%,50V,Plastic	CIRCUIT NO.	PART NO.	DESCRIPTION
C505,C506	354742219	220 μ F,16V,Elect.		Capacitors	
C507-C510	354781009	10 μ F,50V,Elect.	C992	374731044	0.1 μ F±5%,100V,Plastic
C517,C518	374724734	0.047 μ F±5%,50V,Plastic	C993,C994	374721044	0.1 μ F±5%,50V,Plastic
C519,C520	374721044	0.1 μ F±5%,50V,Plastic		Resistors	
C521,C522	354744709	47 μ F,16V,Elect.	R991,R992	453530104	1Ω±5%,1/2W,Metal
C525,C526 C581	354771019	100 μ F,63V,Elect.	R993		0.1 Ω ±5%,1/4W,Metal
C581 C583	354721019	100 μ F,6.3V,Elect.		Sockets	
C905,C906	354780109	1 μ F,50V,Elect.	JL901B		NSCT-7P898
C905,C906 C915,C916	374731044 3504351	0.1 μ F±5%,100V,Plastic 10000 μ F,56V,Elect.	JL911B	25050284	NSCT-7P112
,	-30.001	.0000 # ( ,00 V ,EIBCL .	VOLUME CONT	BOL BO BOARS	(NACTO CTOT 4 - K-)
			CIRCUIT NO.		(NAETC-6767-1A/1B) DESCRIPTION
			JL701A		NSCT-3P874,Socket
			S7001		EC16B2425,Rotary encoder

DSP CIRCUIT P	C BOARD (NADG-6 PART NO.	5575-6A/6B) DESCRIPTION	CIRCUIT NO.	PART NO. Transistors	DESCRIPTION
	ICs		Q402,Q403	2215410R2	RN1441
Q101,Q102	22240581R1 or	NJM4565M or	Q7002	2214490R2	RN1404
~	22241383R2	NJM4565M-D	Q7003,Q7004	2214540R2	RN2403
Q114	22241338R2	AK4110VF	Q763,Q764	2212445 or	2SK365-GR or
Q701	22278033ENEC	MPC29M33HF		2212446	2SK365-BL
Q702	22241399R2	TC7WU04F		Diodes	
Q707	22241340R9	CS492604-CL	D1001	223233R1 or	1SS355 or
Q708,Q709	22274574ER2TO	TC74VHC574FT		223234R2	1SS352 <p></p>
Q710	22241415R2 or	LC372100PT-K34-TLM or	D7001	225290	SEL4110R
	22241532R3	IN-0095	D7002,D7003	223233R1 or	1SS355 or
Q713	22274244ER2TO	TC74VHC244FT	D7005-D7008	223234R2	1SS352
Q8501	22241341R3	AK4526A-VQ	D7004	224490560R2	
	Diodes		D7009	224490910R2	
D101,D102	223233R1 or	1SS355 or	D7010	223233R1 or	1SS355 or
D104-D109	223234R2	1SS352		223234R2	1SS352
	Colls		D761,D762	223233R1 or	1SS355 or
L108-L110	231237M022R2	NCH-1471		223233R1	1SS355
L170,L171	230921R2	BLM21B222SPT		Coils	
L703-L705	231237M022R2	NCH-1471	L7001-L7003	231237K220R2	2 NCH-1477
L8501,L8502	231237M022R2	NCH-1471		Oscillators	
R8507,R8508	230921R2	BLM21B222SPT	X1001	3010203	AF6146CG <p></p>
	Oscillators		X7001	3010242	CST5.00MGW
X103	3010327 or	AT-4912.288MHz or		Capacitors	
	3010320	AT-49 12.288MHz	C1001	355780229	$2.2 \mu$ F,50V,Elect. <p></p>
X701	3010278	CST12.2MTW040	C1003	355721019	100 μ F,6.3V,Elect. <p></p>
	Capacitors		C401,C402	355744709	47 μ F,16V,Elect.
C101,C102	356741009R2	10 μ F,16V,Elect.	C407,C408	355741009	10 μ F,16V,Elect.
C108	356741009R2	10 μ F,16V,Elect.	C7001	355780229	2.2 µ F,50V,Elect.
C115,C116	373021524R2	1500pF±5%,50V,Plastic	C7002	3000078	DX-5R5L104,Super
C148,C158	356724709R2	47 $\mu$ F,6.3V,Elect.	C7004,C7005	355721019	100 μ F,6.3V,Elect.
C701,C702	354724719S	470 μ F,6.3V,Elect.	C7008,C7018	355721019	100 µ F,6.3V,Elect.
C703,C704	356721019R2	100 μ F,6.3V,Elect.	C7009,C7010	355780109	1 μ F,50V,Elect.
C716,C718	356724709R2	47 μ F,6.3V,Elect.	C7014	355780109	$1 \mu$ F,50V,Elect.
C8501,C8507	356721019R2	100 μ F,6.3V,Elect.	C7015	355741009	10 μ F,16V,Elect.
C8504	356741009R2	10 μ F,16V,Elect.	C7019	355721019	100 µ F,6.3V,Elect.
C8509-C8514	356741009R2	10 μ F,16V,Elect.	C761	355744709	47 μ F,16V,Elect.
C8515-C8520	373023324R2	3300pF±5%,50V,Plastic	C762	374723344	$0.33\mu\text{F}{\pm}5\%,50\text{V,Plastic}$
C8521-C8526	373021524R2	1500pF±5%,50V,Plastic	C763	374721544	$0.15\mu\text{F}{\pm}5\%,50\text{V},\text{Plastic}$
C8527-C8532	373021024R2	1000pF±5%,50V,Plastic	C764	374721044	0.1 μ F±5%,50V,Plastic
	Sockets		C767,C768	355744709	47 μ F,16V,Elect.
P7004B	25052049,	NSCT-40P1836,	C769,C770	355741009	10 μ F,16V,Elect.
	25050980,	NSCT-40P767,		Switches	
	25051306,	NSCT-40P1095,	S7101-S7109	25035652	NPS-111-S604
	25051847 or	NSCT-40P1634 or	S7111-S7118	25035652	NPS-111-S604
	25052236	NSCT-40P2133	S7121-S7128	25035652	NPS-111-S604
P7205	2009990589UL	NSAS-14P0802	S7131-S7138	25035652 Sockets	NPS-111-S604
DISPLAY CIRCU	IT PC BOARD (NA	DIS-6576-3A/3B/3C/3D)	JL702A	25051090	NSCT-6P877
CIRCUIT NO.	PART NO.	DESCRIPTION	P7001A	25052086,	NSCT-40P1873
	FL tube		P7004B	25050946,	NSCT-40P733
Q7005	212198	15-BT-64GNK		25051344,	NSCT-40P1133
	Remote sensor			25051884 or	NSCT-40P1671
U7001	241330	PIC-26043TE2		25052273	NSCT-40P2170
	lCs		P7206	2009990590UL	NSAS-4P0803
Q1001	22241297R2	BU1923F <p></p>		Plug	
Q401	22240581R1 or	NJM4565M or	JL701B	25055624	NPLG-3P586
	22241383R2	NJM4565M-D		Holder	
Q7001	22241479	MPD780208GF-064-3BA	Q7005A	27191074	(FL)
Q761	22241383R2	NJM4565M-D			

MAIN PC BC	ARD (NAAR-6577-	3A/3B/3C/3D)	CIRCUIT NO.	PART NO.	DESCRIPTION
CIRCUIT NO	. PART NO.	DESCRIPTION		Terminal	DESCRIPTION
Q251	ICs	701.05	P261	25045575 or	NPJ-4PDRW389 or
Q261	222780053 22241383R2	78L05 NJM4565M-D		25045303	NPJ-4PDBL162
Q3151	22241221R2	TC9164AF	" 0444	Sockets	
Q921	222780125	78M12HF	JL911A	25051111	NSCT-7P898
Q922	222790125	79M12HF	P101	25052024,	NSCT-15P1811,
Q931	222780565JRC			25050955,	NSCT-15P742,
Q933,Q934	222780055	78M05HF		25051281,	NSCT-15P1070,
	Transistors	1 0.11001 11		25051822 or	NSCT-15P1609 or
Q244	2214350.	RN2202,	P242	25052211	NSCT-15P2108
	2215770 or	KRA102M or	P520		OU NSAS-18P0731
	2213510	DTA114ES	P7001B	25052138	NSCT-7P2036
Q245,Q246	2215024	2SD1468S-R	170016	25052049,	NSCT-40P1836,
Q247	2212115,	2SC2458-GR,		25050980,	NSCT-40P767,
	2215864 or	KTC3199-GR or		25051306, 25051847 or	NSCT-40P1095,
	2213284	2SC1740S-R <p></p>		25051647 07	NSCT-40P1634 or NSCT-40P2133
Q932	2215975 or	KTA1266-GR or	JL961A	25052230	NSCT-3P894
	2211455	2SA1015-GR	0200171	Plugs	11301-31-034
	Diodes		P204A	25055787	NPLG-8P743
D203,D204	224490620R2	UDZ6.2B	P205A	25055795	NPLG-16P751
D901	22380022	RBV402 or	P206A,P304A	25055783	NPLG-4P739
	22380285F	RS403M	P303A	25055797	NPLG-18P753
D931	224490620R2	UDZ6.2B		Heat sinks	74 Ed 101 730
D932	223233R1 or	1SS355 or	Q921	27160179	
	223234R2	1SS352	Q922	27160229	RAD-078
D933-D938	22380032,	1SR139-100,	Q933A	27160391	
D940,D941	22380035 or	GP104003E or		Screws	
	22380260	RL1N4003	Q921B,Q922B	82143010	3P+10FN(BC),Pan head
D939	224492700R2	UDZ27B	Q933B,Q934B	82143010	3P+10FN(BC),Pan head
D942,D943	224490750R2	UDZ7.5B	,		or the theory, an head
	Capacitors		HEADPHONE 1	TERMINAL PC B	OARD (NAETC-6779-3A/3B/3C/3D)
C266	354780229	$2.2\mu$ F,50V,Elect.	CIRCUIT NO.	PART NO.	DESCRIPTION
C267,C268	354741009	$10 \mu$ F,16V,Elect.		Terminal	DESCRIPTION
C269,C270	354721019	$100 \mu$ F,6.3V,Elect.	P7003	25045514	YKB26-5005
C273,C274	374728224	8200pF±5%,50V,Plastic		Socket	
C275,C276	374721824	1800pF±5%,50V,Plastic	JL702B	25051090	NSCT-6P877
C277,C278	354744709	$47 \mu$ F,16V,Elect.		Plugs	
C281	354741009	10 μ F,16V,Elect.	P504B	25055445	NPLG-7P427
C282,C284	354780339	$3.3 \mu$ F,50V,Elect.			
C3151,C3152	354741009	10 μ F,16V,Elect.	TONE CONTRO	L PC BOARD (N	NAETC-6780-3A/3B/3C/3D)
C923	3504213	4700 $\mu$ F,35V,Elect.	CIRCUIT NO.	PART NO.	DESCRIPTION
C924	354761029	1000 μ F,35V,Elect.		Plug	
C927,C928	354741009	10 μ F,16V,Elect.	P391A	25055139	NPLG-9P123
C930	355780229	2.2 μ F,50V,Elect.		Capacitors	
C933	354742229	2200 μ F,16V,Elect.	C391,C392	374721534	0.015 μ F±5%,50V,Plastic
C935	354741009	10 μ F,16V,Elect.		Resistor	
C936	354762219	220 μ F,35V,Elect.	R391,R392	5104356Y	N14RLC100KWT20Z,Variable
C937	354772219	220 µ F,63V,Elect.			
C942,C943	354741009	10 μ F,16V,Elect.			
C944,C945	354744709	47 μ F,16V,Elect.			
B021-B025	Resistors	0.000 50/ 4/00/			
R921-R925	453532294	0.22 Ω ±5%,1/2W,Metal			Note: <d>:120V model only</d>
R926,R927 R929	452630564	5.6 Ω±5%,1W,Metal			<p>:European model only</p>
R932	441623304	33Ω±5%,1W,Metal oxide			<t>:Asian model only</t>
R933	452530224	2.2Ω±5%,1/2W,Metal			<a>:Australian model only</a>
R934	452630224 442522204	$2.2 \Omega \pm 5\%$ , 1W, Metal $22 \Omega \pm 5\%$ , 1/2W, Metal oxide			<w>:Worldwide model only</w>
R937	452630334	3.3Ω±5%,1W,Metal			<r>:Chinese model only</r>
R938,R939	443523314	330 Ω±5%,1/2W,Metal oxide			<gt>:220V model only</gt>

# ADJUSTMENT PROCEDURES AND CONFIRMATION

### 1. Idling current adjustment

Before Idling adjustment, turn the trimming resistors R573, R574, R673, R674 and R1532 to counter clockwise. Connect the DC voltmeter to sockets P511,P512, P611, P612 and P1511.

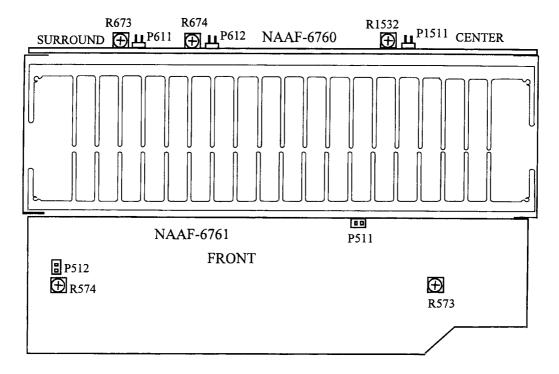
After turn POWER to ON, adjust the trimming resistors R573, R574, R673, R674 and R1532 so that the reading of voltmeter becomes  $2.5\pm0.2$ mV.

After adjustment, attach the top cover.

Confirm the voltage of above points after five minutes.

Readjust the above resistors so that the voltage becomes  $6.5\pm0.2$ mV.

Note: No load and No signal



### Confirmation of protection circuit

## 1. Confirmation of operation of speaker relay

Confirm that the speaker relay turns ON approximate. 5 seconds after the power switch is turned ON. Confirm that the speaker relay turns OFF immediately after the power switch is turned OFF.

### 2. Confirmation of DC detection circuit

Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time. During "TEST-" on the FL tube is displayed, press DVD button. Next, press CD button.(Refer to Test mode.) Apply DC 1.5~3V to MULTI CHANNEL INPUT terminals with no load.

Confirm that the speaker relay turns OFF.

Apply DC -1.5 $\sim$ -3V to MULTI CHANNEL INPUT terminals with no load.

Confirm that the speaker relay turns OFF.

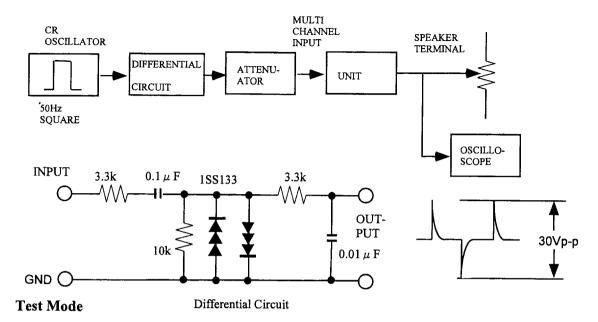
# 3. Confirmation of Current detection circuit

Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time. During "TEST-" on the FL tube is displayed, press DVD button. Next, press CD button.

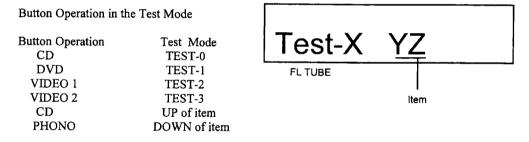
Connect Differential circuit and apply the 50Hz square signal to the terminal of MULTI CHANNEL INPUT.

Adjust the attenuator or Volume so that the output level becomes 30V p-p.

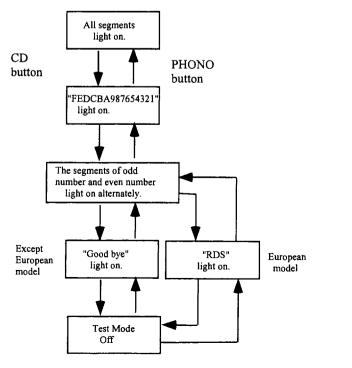
Confirm that the speaker relay turns OFF when a 1.5 ohm load is connected.



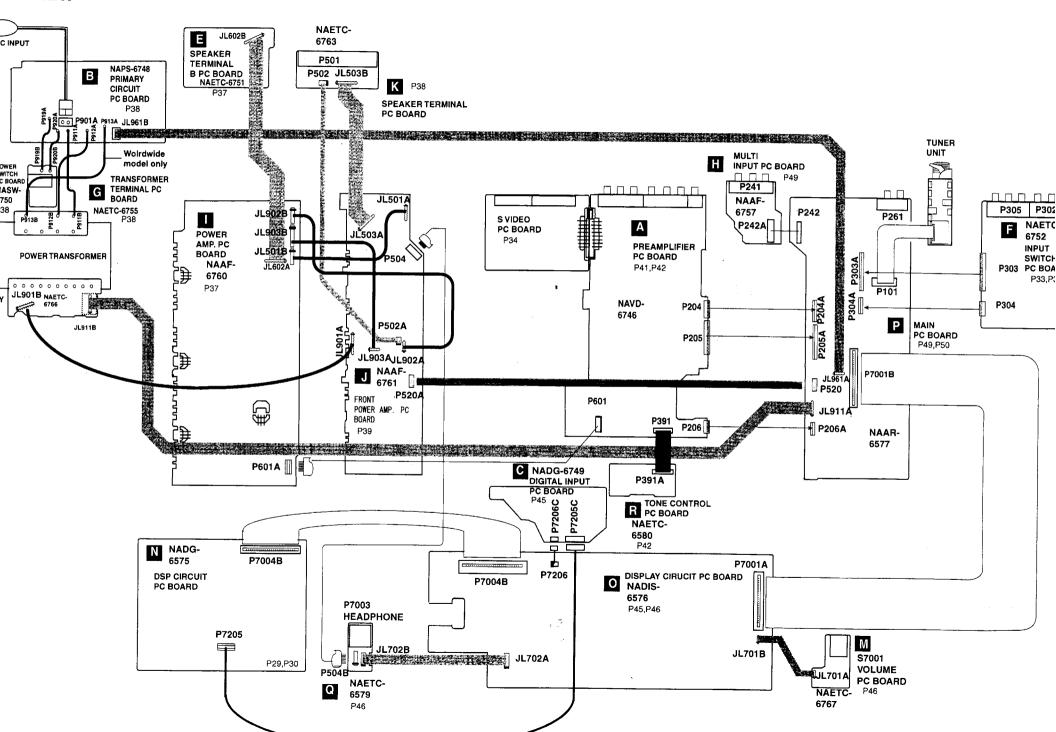
- 1. Turn POWER button on.
- 2. Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time.
- 3. During "TEST-" on the FL tube is displayed, press CD, DVD, VIDEO 1, or VIDEO 2 button to set the unit to the test mode shown below.
- 4. Press CD or PHONO button to select the test item.



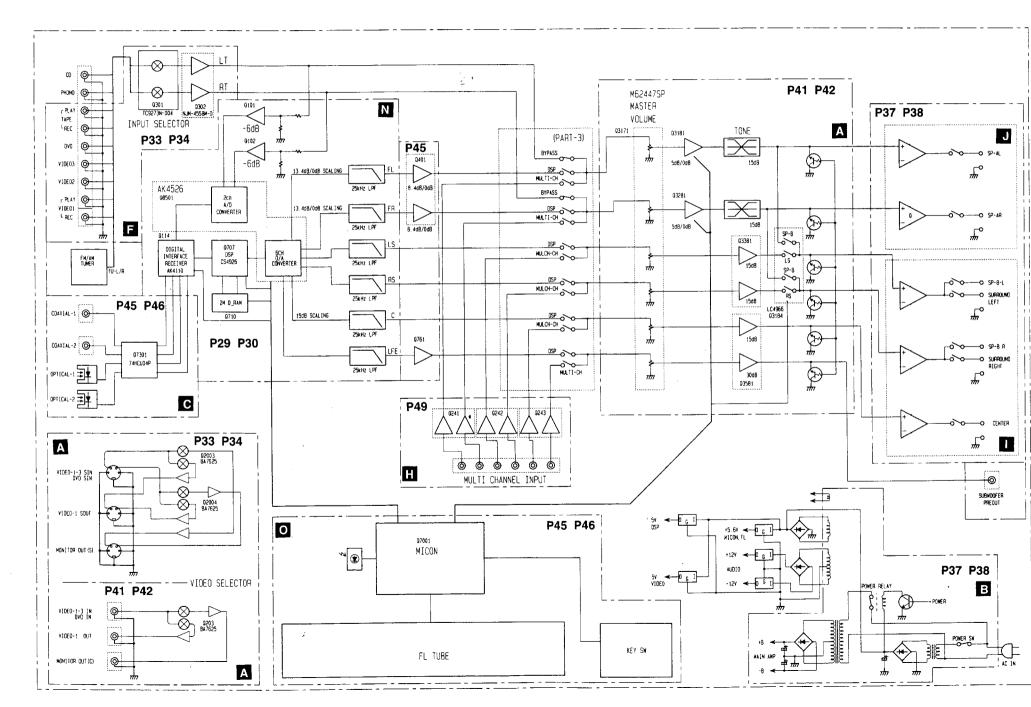
# TEST-0



# IG VIEW

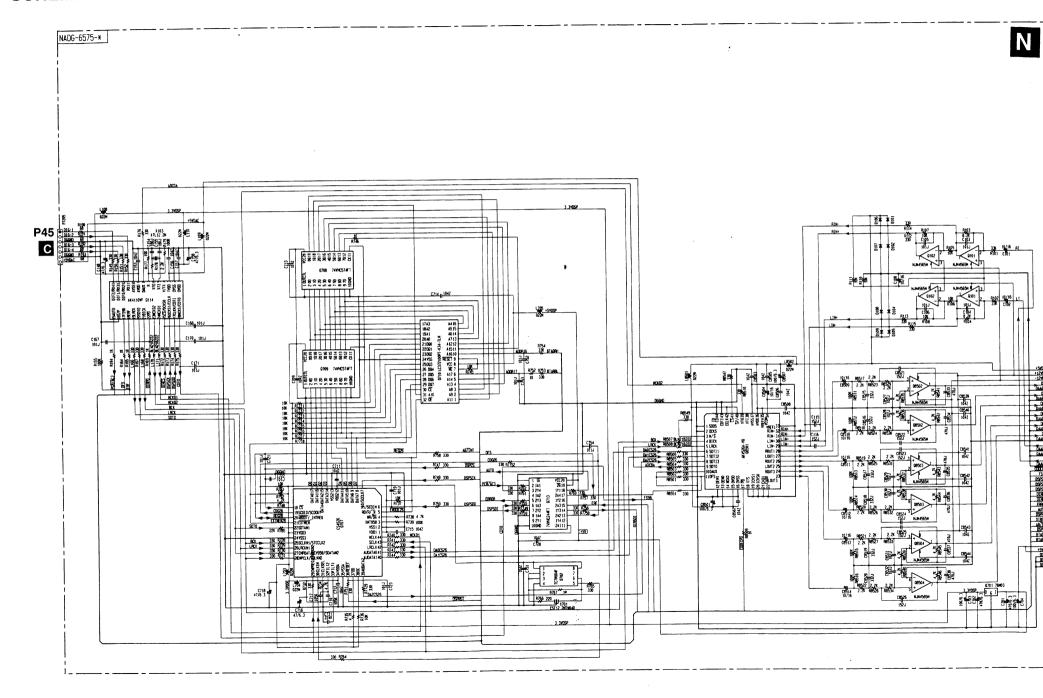


# **BLOCK DIAGRAM**

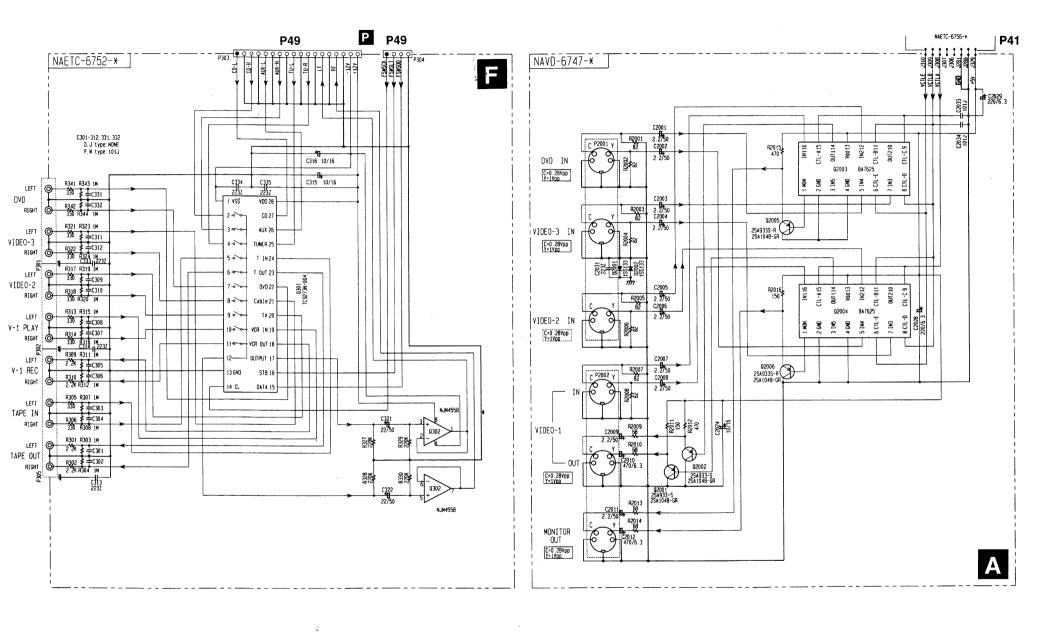


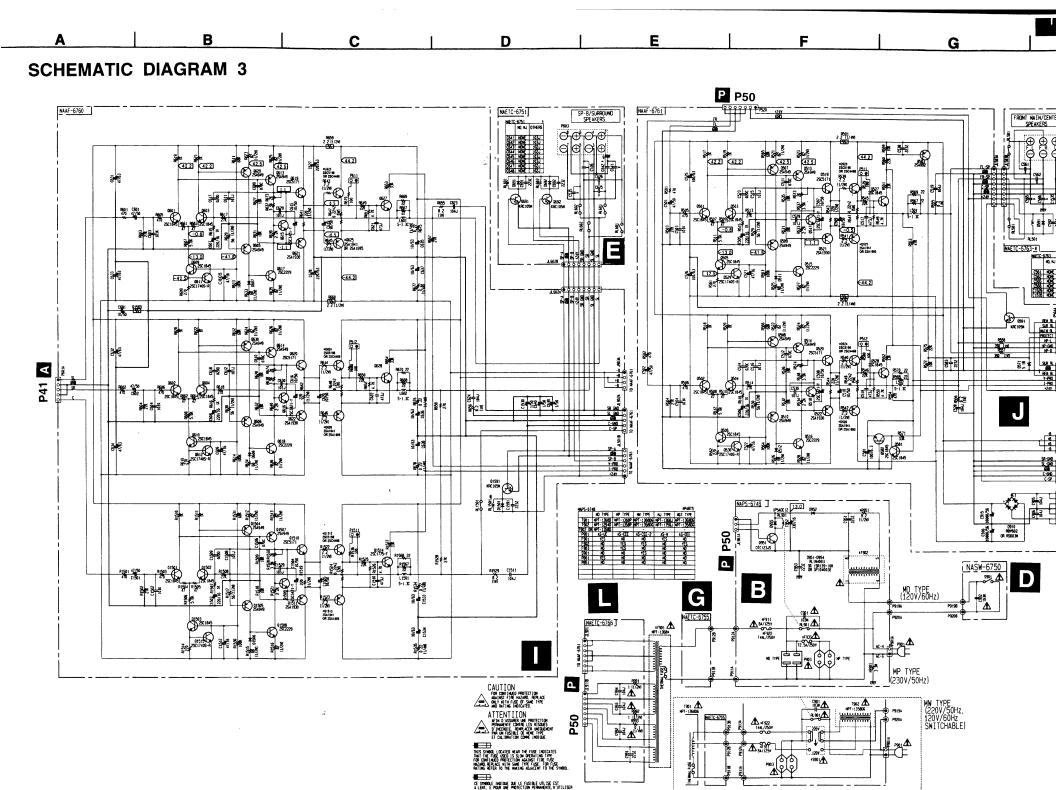
A B C D E F G

# SCHEMATIC DIAGRAM 1



# **SCHEMATIC DIAGRAM 2**

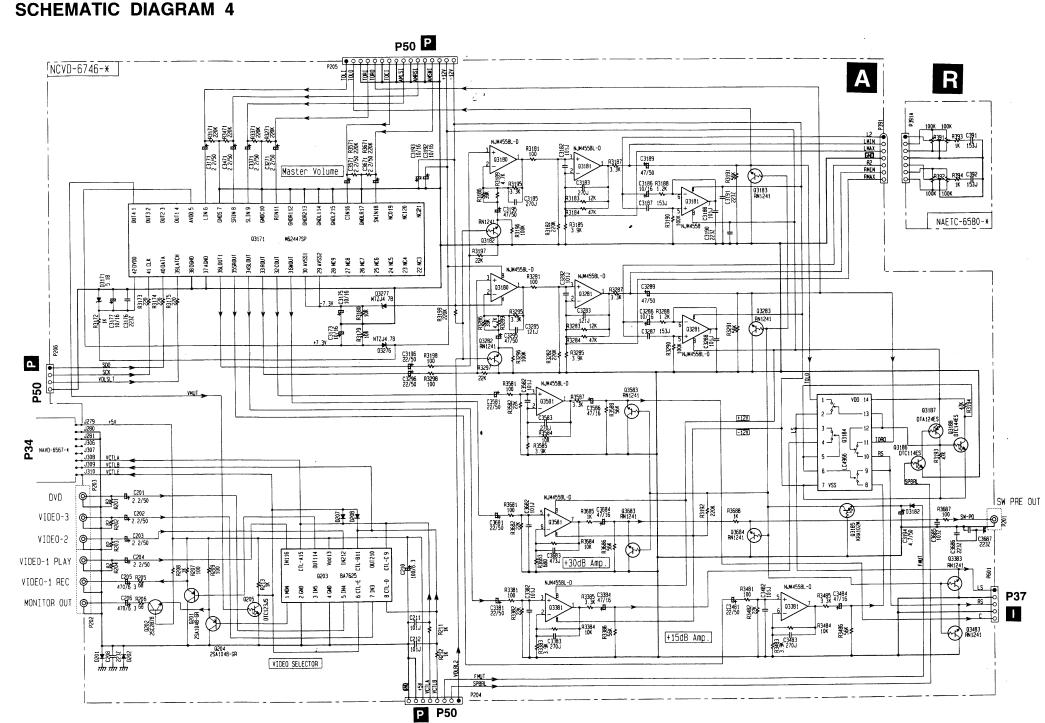




G

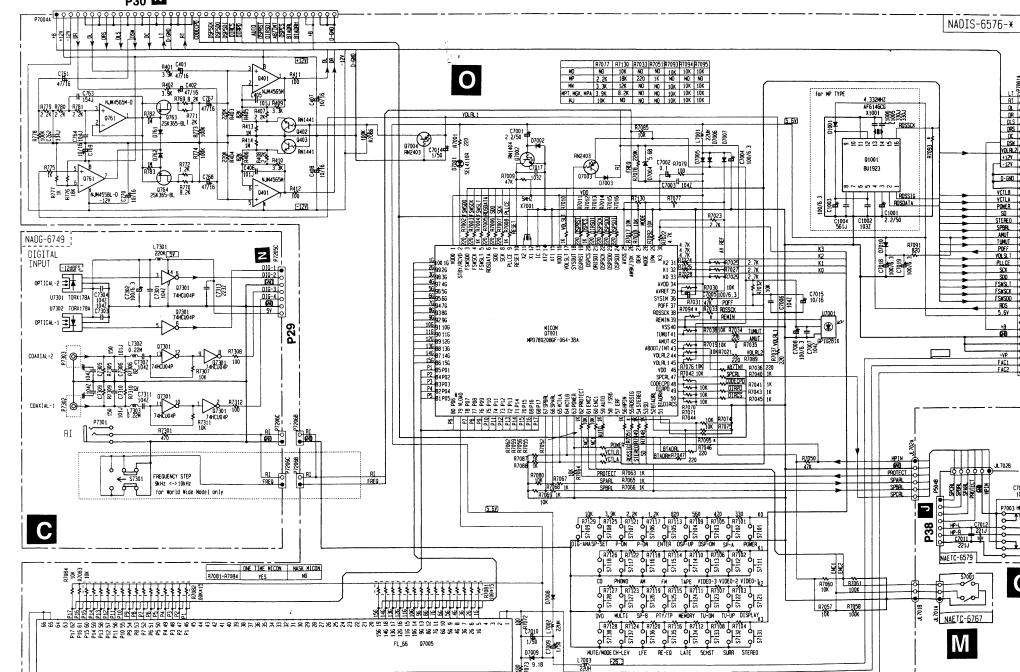
В

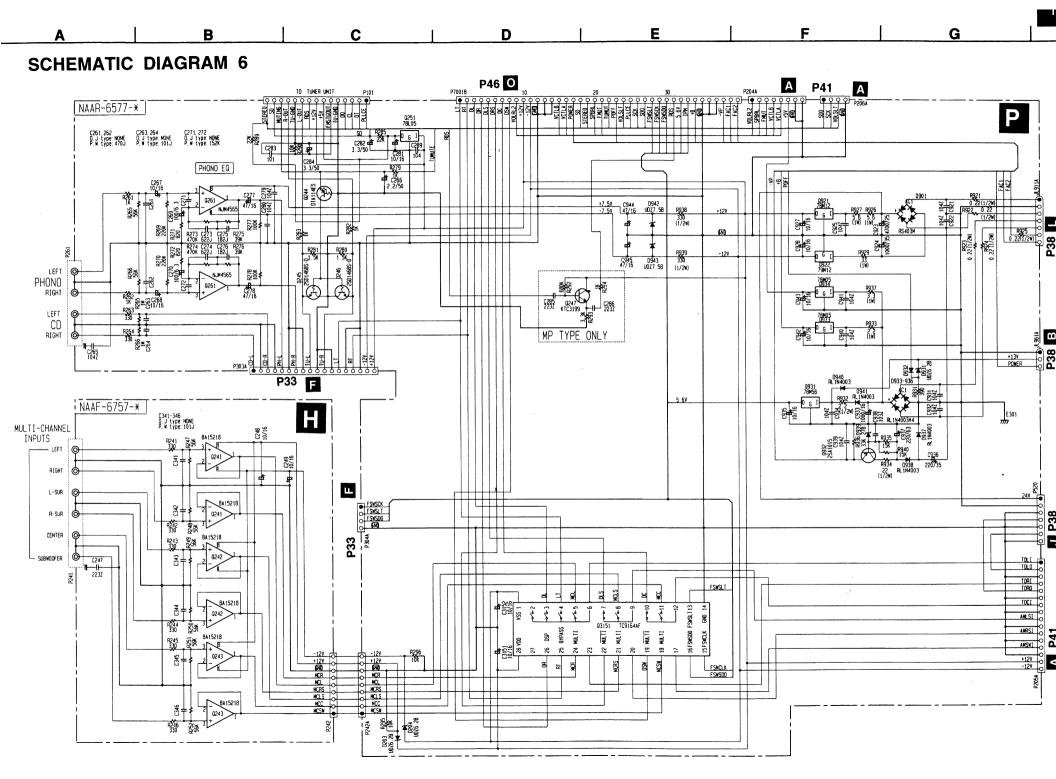
C



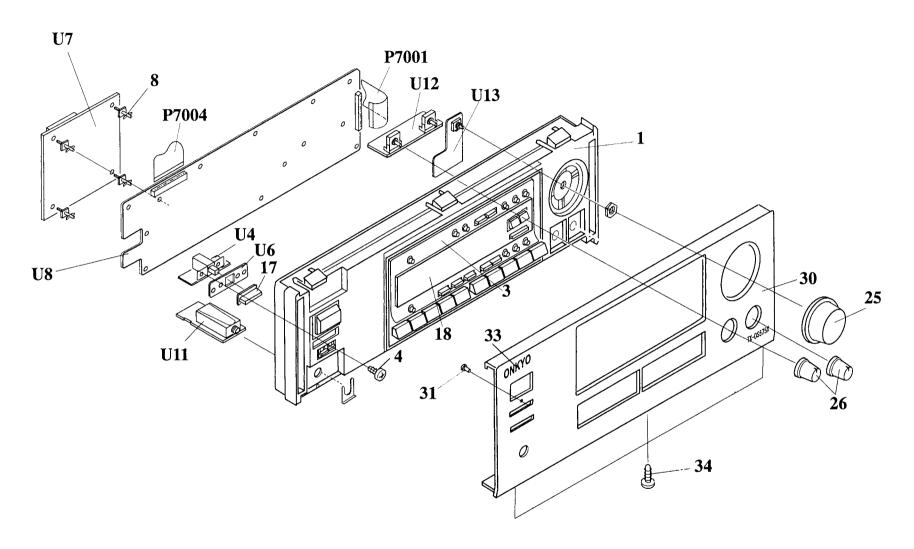
D

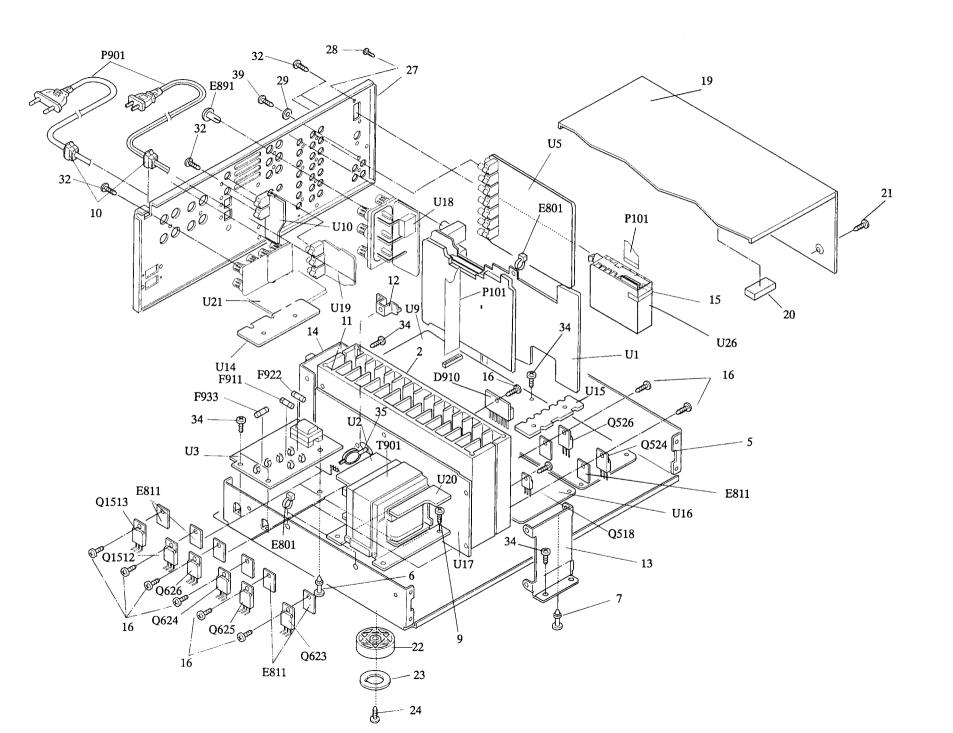
E





# **EXPLODED VIEW**







27122708

Rear panel <GT>

			BEE NO.	DART NO	DECORPORA
	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION 3TTB+6B(BC),Self-tapping screw Note: <b>:Black model only</b>
1	27111108	Front bracket <b></b>	28	838430068	
	27111110	Front bracket <g></g>	29	87643010	110 101 (20),1 101 1101111
_	27111109	Front bracket <s></s>	30	27212196	Total pariet (a)
2	27160439	Heat sink S		27212199	
3	27215319	Decorative frame <b> <d a="" r="" t="" w=""></d></b>	04	27212198	
	27215320	Decorative frame <s></s>	31	28198778	
	27215321	Decorative frame <g></g>	32	838430088	
_	27215322	Decorative frame <b> <p></p></b>	33	28135244Y	
4	82143010	3P+10FN(BC),Pan head screw	0.4	28135245	<b>-</b>
5	27100371A	Chassis	34	838130088	
6	27190266	KGLS-12RF,Holder	35	27190807	Holder
7	27190428A	KGLS-10RF,Holder	36	27190541	WS-1NS, Wire clamp
8	27190896	KGLS-10S,Holder	37	27268028	Guide
9	830440089	4TTC+8C(BC),Self-tapping screw	39	838930088	3TTB+8B(UN),Self-tapping screw
10	27300750	⚠ Bushing cord	D910	22380038 or	RBV602 or
11	27160438	Heat sink L	F004	22380274	RS603M, Diode
12	27141681	Retainer PWB	E801	260208	Wire tie
13	27141736	Retainer, front	E811	223024Y	A AC238, Isolated sheet
14	27141737	Retainer, rear	E891	880048	P-3055B-8L,Plastic rivet <p a="" gt="" t=""></p>
15	29110083	Tape, cloth	F911	252198Y	A 8A-UL, Primary fuse <d r="" w=""></d>
16	801433	3SMS8W.SW+14B(BC), Special screw	F922	252077 or	A 4A-SE-EAK or
17	28325497A	Knob, power <b></b>		252243	A 4A-SE-TL250V, Primary fuse <p a="" gt="" r="" t="" w=""></p>
	28325499A	Knob, power <g></g>	F933	252075 or	△ 2.5A-SE-EAK or
	28325547A	Knob, power <s></s>	Die	252241	△ 2.5A-SE-TL250V, AC Outlet fuse <p t=""></p>
18	28191846	Clear plate <b> <p></p></b>	P101	2047152012	A NOFET-152012, Flexible flat cable
	28191847	Clear plate <s></s>	P7001	2047402512	△ NCFC7-402512, Flexible flat cable
	28191881	Clear plate <b> <d a="" r="" t="" w=""></d></b>	P7004		△ NCFC7-401512,Flexible flat cable
	28191882	Clear plate <g></g>	P901		AS-CEE, or
19	28184752	Top cover <b></b>		253195MAR	AS CEE, Power supply cord <p gt="" t=""></p>
	28184753	Top cover <g></g>		253197HIT	A AS-SAA, Power supply cord <a></a>
	28184754	Top cover <s></s>		253233KAW	
20	28141272Y	t 10x60x20, Cushion			A AS-CCEE or
21	838430088	3TTB+8B(BC),Self-tapping screw <b></b>		253267KAW	
	838930088	3TTB+8B(UN),Self-tapping screw <g s=""></g>			△ AS-UC-2#18 or
22	27175319A	Leg		253280VOL	AS-UC-2#18, Power supply cord <d></d>
23	28141332	Cushion	Q1512	2203063,	* 2SC5198-O,
24	831430088	3TTW+8B(BC),Self-tapping screw	Q523	2202523,	* 2SC4468-O,
25	28325648	Knob, volume <d></d>	Q524	2202524,	* 2SC4468-Y,
	28325651	Knob, volume <b> <p a="" r="" t="" w=""></p></b>	Q623	2202526 or	* 2SC4468-P or
	28325653	Knob, volume <g></g>	Q624	2203062	* 2SC5198-R,Transistor
	28325652	Knob, volume <s></s>	Q1513	2203053,	* 2SA1941-O,
26	28325405	Knob, tone <b></b>	Q525	2202513,	* 2SA1695-O,
	28325407	Knob, tone <g></g>	Q526	2202514,	* 2SA1695-Y,
	28325474	Knob, tone <s></s>	Q625	2202516 or	* 2SA1695-P or
27	27122702	Rear panel <d></d>	Q626	2203052	* 2SA1941-R,Transistor
	27122703	Rear panel <p></p>	Q517	2212654 or	2SC3421-Y or
	27122704	Rear panel <t></t>	Q518	2212653	2SC3421-O, Transistor
	27122705	Rear panel <w></w>			
	27122706	Rear panel <r></r>			
	27122707	Rear panel <a></a>			

NAETC-6/31-1A,Speaker terminal B PC board ass'y <p a="" gt="" r="" t="" w=""> TFCE1U114A,Tuner unit <d> TFCE1E512A,Tuner unit <p a="" gt="" r="" t="" w="">  NOTE: THE COMPONENTS INDENTIFIDE BY MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.</p></d></p>		C-6751-1A.Speaker terminal B PC board ass'y <d></d>	• •
TFCE1U114A, Tuner unit <d> TFCE1E512A, Tuner unit <p a="" gt="" r="" t="" w="">  NOTE: THE COMPONENTS INDENTIFIDE BY MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.</p></d>			OT.
NOTE: THE COMPONENTS INDENTIFIDE BY MARK A ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.		, , , , , , , , , , , , , , , , , , ,	G1>
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	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
T901		NPT-1368D,Power transformer <d></d>	U10	1A873549-1A	NADG-6749-1A, Digital input PC board ass'y <d></d>
		NPT-1368P,Power transformer <p a="" t=""></p>		1A873549-1B	NADG-6749-1B, Digital input PC board ass'y <p t=""></p>
		NPT-1368DG, Power transformer <w gt="" r=""></w>		1A873549-1C	NADG-6749-1C, Digital input PC board ass'y <a></a>
U1	1A873546-1A	NAVD-6746-1A,Pre., amplifier PC board ass'y <d></d>		1A873549-1D	NADG-6749-1D, Digital input PC board ass'y <w></w>
	1A873546-1B	NAVD-6746-1B,Pre., amplifier PC board ass'y <p t=""></p>		1A873549-1G	NADG-6749-1G, Digital input PC board ass'y <r></r>
	1A873546-1C	NAVD-6746-1C,Pre., amplifier PC board ass'y <a></a>		1A873549-1H	NADG-6749-1H, Digital input PC board ass'y <gt></gt>
	1A873546-1D	NAVD-6746-1D,Pre., amplifier PC board ass'y <w></w>	U11	1A873579-3A	NAETC-6579-3A,Headphone terminal PC board ass'y <d></d>
	1A873546-1G	NAVD-6746-1G,Pre., amplifier PC board ass'y <r></r>		1A873579-3B	NAETC-6579-3B,Headphone terminal PC board ass'y <p></p>
	1A873546-1H	NAVD-6746-1H,Pre., amplifier PC board ass'y <gt></gt>		1A873579-3C	NAETC-6579-3C,Headphone terminal PC board ass'y <t a="" gt=""></t>
U2	1A873555-1A	NAETC-6755-1A, Transformer terminal PC board ass'y <d></d>		1A873579-3D	NAETC-6579-3D,Headphone terminal PC board ass'y <w r=""></w>
	1A873555-1B	NAETC-6755-1B,Transformer terminal PC board ass'y <p t=""></p>	U12	1A873580-3A	NAETC-6580-3A,Tone control PC board ass'y <d></d>
	1A873555-1C	NAETC-6755-1C, Transformer terminal PC board ass'y <a></a>		1A873580-3B	NAETC-6580-3B,Tone control PC board ass'y <p></p>
	1A873555-1D	NAETC-6755-1D, Transformer terminal PC board ass'y <w></w>		1A873580-3C	NAETC-6580-3C,Tone control PC board ass'y <t a="" gt=""></t>
	1A873555-1G	NAETC-6755-1G, Transformer terminal PC board ass'y <r></r>		1A873580-3D	NAETC-6580-3D,Tone control PC board ass'y <w r=""></w>
	1A873555-1H	NAETC-6755-1H, Transformer terminal PC board ass'y <gt></gt>	U13	1A873567-1A	NAETC-6767-1A, Volume control PC board ass'y <d></d>
U3	1A873548-1A	NAPS-6748-1A, Primary circuit PC board ass'y <d></d>		1A873567-1B	NAETC-6767-1B,Volume control PC board ass'y <p a="" gt="" r="" t="" w=""></p>
	1A873548-1B	NAPS-6748-1B,Primary circuit PC board ass'y <p t=""></p>	U14	25136765	NCETC-6765,PC board for lead wire
	1A873548-1C	NAPS-6748-1C,Primary circuit PC board ass'y <a></a>	U15	25136764	NCETC-6764,PC board for lead wire
	1A873548-1D	NAPS-6748-1D, Primary circuit PC board ass'y <w></w>	U16	1A873561-1A	NAAF-6761-1A,Front channel power amplifier PC board ass'y <d></d>
	1A873548-1G	NAPS-6748-1G,Primary circuit PC board ass'y <r></r>		1A873561-1B	NAAF-6761-1B,Front channel power amplifier PC board ass'y <p a="" gt="" r="" t="" w=""></p>
	1A873548-1H	NAPS-6748-1H,Primary circuit PC board ass'y <gt></gt>	U17	1A873560-1A	NAAF-6760-1A,Power amplifier PC board ass'y <d></d>
U4	1A873550-1A	NASW-6750-1A,Power switch PC board ass'y <d></d>		1A873560-1B	NAAF-6760-1B,Power amplifier PC board ass'y <p a="" gt="" r="" t="" w=""></p>
	1A873550-1B	NASW-6750-1B,Power switch PC board ass'y <p t=""></p>	U18	1A873563-1A	NAETC-6763-1A,Speaker terminal PC board ass'y <d></d>
	1A873550-1C	NASW-6750-1C,Power switch PC board ass'y <a></a>		1A873563-1B	NAETC-6763-1B,Speaker terminal PC board ass'y <p a="" gt="" r="" t="" w=""></p>
	1A873550-1D	NASW-6750-1D,Power switch PC board ass'y <w></w>	U19	1A873557-1A	NAAF-6757-1A, Multi-channel input terminal PC board ass'y <d></d>
	1A873550-1G	NASW-6750-1G,Power switch PC board ass'y <r></r>		1A873557-1B	NAAF-6757-1B, Multi-channel input terminal PC board ass'y <p t=""></p>
	1A873550-1H	NASW-6750-1H,Power switch PC board ass'y <gt></gt>		1A873557-1C	NAAF-6757-1C, Multi-channel input terminal PC board ass'y <a></a>
U5	1A873552-1A	NAETC-6752-1A,Input switch PC board ass'y <d></d>		1A873557-1D	NAAF-6757-1D, Multi-channel input terminal PC board ass'y <w></w>
	1A873552-1B	NAETC-6752-1B,Input switch PC board ass'y <p t=""></p>		1A873557-1G	NAAF-6757-1G, Multi-channel input terminal PC board ass'y <r></r>
	1A873552-1C	NAETC-6752-1C,Input switch PC board ass'y <a></a>		1A873557-1H	NAAF-6757-1H, Multi-channel input terminal PC board ass'y <gt></gt>
	1A873552-1D	NAETC-6752-1D,Input switch PC board ass'y <w></w>	U20	1A873566-1A	NAETC-6766-1A,Secondary circuit PC board ass'y <d></d>
	1A873552-1G	NAETC-6752-1G,Input switch PC board ass'y <r></r>		1A873566-1B	NAETC-6766-1B,Secondary circuit PC board ass'y <p a="" gt="" r="" t="" w=""></p>
	1A873552-1H	NAETC-6752-1H,Input switch PC board ass'y <gt></gt>	U21	1A873551-1A	NAETC-6751-1A,Speaker terminal B PC board ass'y <d></d>
U6	25136753	NCETC-6753,PC board for holder		1A873551-1B	NAETC-6751-1B,Speaker terminal B PC board ass'y <p a="" gt="" r="" t="" w=""></p>
U7	1A873575-6A	NADG-6575-6A,DSP circuit PC board ass'y <d></d>	U26	240134	TFCE1U114A,Tuner unit <d></d>
	1A873575-6B	NADG-6575-6B,DSP circuit PC board ass'y <p a="" gt="" r="" t="" w=""></p>		240135	TFCE1E512A,Tuner unit <p a="" gt="" r="" t="" w=""></p>
U8	1A873576-3A	NADIS-6576-3A, Display circuit PC board ass'y <d></d>			
	1A873576-3B	NADIS-6576-3B, Display circuit PC board ass'y <p></p>			
	1A873576-3C	NADIS-6576-3C, Display circuit PC board ass'y <t a="" gt=""></t>			
	1A873576-3D	NADIS-6576-3D, Display circuit PC board ass'y <w r=""></w>			
U9	1A873577-3A	NAAR-6577-3A,Main PC board ass'y <d></d>			
	1A873577-3B	NAAR-6577-3B,Main PC board ass'y <p></p>			<u>-</u>
		NAAD GEET GOAL : DOL TAYOT			

CAUTION: Replacement for transistor of mark \*, if necessary must be made from the same beta group (HFE) as the original type.

NAAR-6577-3C,Main PC board ass'y <T/A/GT> NAAR-6577-3D,Main PC board ass'y <W/R>

1A873577-3C

1A873577-3D

# **PACKING VIEW**

